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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,506	02/22/2002	David G. McLeod	1062-013	9970
25215	7590	03/22/2007	EXAMINER	
DOBRUSIN & THENNISCH PC			OMGBA, ESSAMA	
29 W LAWRENCE ST			ART UNIT	PAPER NUMBER
SUITE 210				3726
PONTIAC, MI 48342				
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
2 MONTHS		03/22/2007	PAPER	

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/081,506
Filing Date: February 22, 2002
Appellant(s): MCLEOD ET AL.

MAILED
MAR 23 2007
GROUP 3700

Scott A. Chapple
For Appellant

EXAMINER'S ANSWER

This is in response to the substitute appeal brief filed November 29, 2006 appealing
from the Office action mailed July 28, 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,493,920	HILL et al.	12-2002
4,883,310	MIYAZAKI et al.	11-1989

5,115,086	HSIEH	5-1992
4,712,287	JOHNSTON	12-1987
6,592,176	LUMPE et al.	7-2003
6,133,398	BHAT et al.	10-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. in view of Miyazaki et al., Hsieh and Lumpe et al.

Hill et al. discloses a method of assembling a roof module 14 to an automotive vehicle, the method comprising providing the roof module 14 wherein the roof module includes a roof portion 60 having a forward edge, a rearward edge, a pair of side edges and a pair of A-pillars 52 extending adjacent opposing corners of the roof portion, and a windshield 62 having a top edge, a bottom edge and a pair of side edges wherein the top edge of the wind shield is secured to the roof portion adjacent the forward edge of the roof portion and the side edges of the windshield are secured to the A-pillars, the bottom edge is configured for attachment to a body portion of the automotive vehicle upon assembly of the roof module to the automotive vehicle, and the A-pillars and the

body portion of the vehicle include corresponding mating structures (56, 40) for assisting in assembling the roof module to the body portion of the vehicle, and assembling the roof module to the body portion of the vehicle by matingly fitting the mating structures of the A-pillars and the mating structures of the body portion and by adhesively securing the windshield to the body portion of the vehicle, see column 2, lines 18-27 and 43-67, column 3, lines 1-7 and figure 2. Hill et al. does not disclose the top edge of the windshield being adhesively secured to the roof portion adjacent the forward edge of the roof portion. However it is known to adhesively secure a windshield to and edge of a roof portion as attested by Miyazaki et al., see column 4, lines 45-48. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have adhesively secured the top edge of the windshield to the roof portion in the method of Hill et al., in light of the teachings of Miyazaki et al., as is conventional in the art. Although Hill et al./ Miyazaki et al. does not disclose the adhesive as being a urethane adhesive, however it is known to use a urethane adhesive in bonding a windshield to an auto body as attested by Hsieh, see column 1, lines 13-19. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a urethane adhesive in the method of Hill et al./Miyazaki et al., in view of the teachings of Hsieh, in order to impart additional structural integrity to the auto body. Although Hill et al./Miyazaki/Hsieh does not disclose connecting the roof portion of the vehicle to a pair of B-pillars and to a pair of C-pillars of the automotive vehicle body, however such connection of a roof module to a vehicle body is known as attested by Lumpe et al., see column 1, lines 41-54, column 2, lines 1-

9 and 27-67, and column 3, lines 1-8. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have connected the roof portion of Hill et al./Miyazaki/Hsieh to a pair of B-pillars and a pair of C-pillars, in light of the teachings of Lumpe et al., in order to provide additional stiffening of the body of the vehicle. Furthermore it is obvious that the provision of A, B or C-pillars in automotive vehicle bodies depends on the particular model/size size being manufactured and the examiner submits that it is within the general knowledge of one of ordinary skill in the art to assess the need for A, B or C-pillars and appropriately provide them, if needed, to the body of the vehicle being manufactured, including mating fastening structures on a roof module to be attached to the vehicle body.

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. in view of Miyazaki et al., Hsieh, Johnston and Lumpe et al.

Hill et al. discloses a method of assembling a roof module 14 to an automotive vehicle, the method comprising providing the roof module 14 wherein the roof module includes a roof portion 60 having a forward edge, a rearward edge, a pair of side edges and a pair of A-pillars 52 extending adjacent opposing corners of the roof portion, and a windshield 62 having a top edge, a bottom edge and a pair of side edges wherein the top edge of the wind shield is secured to the roof portion adjacent the forward edge of the roof portion and the side edges of the windshield are secured to the A-pillars, the bottom edge is configured for attachment to a body portion of the automotive vehicle upon assembly of the roof module to the automotive vehicle, and the A-pillars and the body portion of the vehicle include corresponding mating structures (56, 40) for

assisting in assembling the roof module to the body portion of the vehicle, and assembling the roof module to the body portion of the vehicle by matingly fitting the mating structures of the A-pillars and the mating structures of the body portion and by adhesively securing the windshield to the body portion of the vehicle, see column 2, lines 18-27 and 43-67, column 3, lines 1-7 and figure 2. Hill et al. does not disclose the top edge of the windshield being adhesively secured to the roof portion adjacent the forward edge of the roof portion. However it is known to adhesively secure a windshield to and edge of a roof portion as attested by Miyazaki et al., see column 4, lines 45-48. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have adhesively secured the top edge of the windshield to the roof portion in the method of Hill et al., in light of the teachings of Miyazaki et al., as is conventional in the art. Although Hill et al./Miyazaki et al. does not disclose the adhesive as being a urethane adhesive, however it is known to use a urethane adhesive in bonding a windshield to an auto body as attested by Hsieh, see column 1, lines 13-19. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a urethane adhesive in the method of Hill et al./Miyazaki et al., in view of the teachings of Hsieh, in order to impart additional structural integrity to the auto body. Furthermore it is known to use gaskets to encapsulate the peripheral edge of a windshield in order to provide a seal against the intrusion of between the windshield and the frame of the vehicle in which it is installed as attested by Johnston, see column 5, lines 12-16. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have

included an encapsulation covering with the windshield of Hill et al./Miyazaki, in light of the teachings of Johnston, in order to provide a seal against the intrusion of between the windshield and the frame of the vehicle in which it is installed. Although Hill et al./Miyazaki/Hsieh/Johnston does not disclose connecting the roof portion of the vehicle to a pair of B-pillars and to a pair of C-pillars of the automotive vehicle body, however such connection of the roof module to the vehicle body is known as attested by Lumpe et al., see column 1, lines 41-54, column 2, lines 1-9 and 27-67, and column 3, lines 1-8. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have connected the roof portion of Hill et al./Miyazaki/Hsieh/Johnston to a pair of B-pillars and a pair of C-pillars, in light of the teachings of Lumpe et al., in order to provide additional stiffening of the body of the vehicle. Furthermore it is obvious that the provision of A, B or C-pillars in automotive vehicle bodies depends on the particular model/size size being manufactured and the examiner submits that it is within the general knowledge of one of ordinary skill in the art to assess the need for A, B or C-pillars and appropriately provide them, if needed, to the body of the vehicle being manufactured, including mating fastening structures on a roof module to be attached to the vehicle body.

Claim 17 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. in view of Miyazaki et al., Hsieh, Bhat et al. and Lumpe et al.

Hill et al. discloses a method of assembling a roof module 14 to an automotive vehicle, the method comprising providing the roof module 14 wherein the roof module includes a roof portion 60 having a forward edge, a rearward edge, a pair of side edges

and a pair of A-pillars 52 extending adjacent opposing corners of the roof portion, and a windshield 62 having a top edge, a bottom edge and a pair of side edges wherein the top edge of the wind shield is secured to the roof portion adjacent the forward edge of the roof portion and the side edges of the windshield are secured to the A-pillars, the bottom edge is configured for attachment to a body portion of the automotive vehicle upon assembly of the roof module to the automotive vehicle, and the A-pillars and the body portion of the vehicle include corresponding mating structures (56, 40) for assisting in assembling the roof module to the body portion of the vehicle, and assembling the roof module to the body portion of the vehicle by matingly fitting the mating structures of the A-pillars and the mating structures of the body portion and by adhesively securing the windshield to the body portion of the vehicle, see column 2, lines 18-27 and 43-67, column 3, lines 1-7 and figure 2. Hill et al. does not disclose the top edge of the windshield being adhesively secured to the roof portion adjacent the forward edge of the roof portion. However it is known to adhesively secure a windshield to and edge of a roof portion as attested by Miyazaki et al., see column 4, lines 45-48. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have adhesively secured the top edge of the windshield to the roof portion in the method of Hill et al., in light of the teachings of Miyazaki et al., as is conventional in the art. Applicant should note that it is conventional to adhesively secure windshields to body portions of vehicle including "bottom ends" of windshields. Although Hill et al./Miyazaki et al. does not disclose the adhesive as being a urethane adhesive, however it is known to use a urethane adhesive in bonding a windshield to an auto body

as attested by Hsieh, see column 1, lines 13-19. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used a urethane adhesive in the method of Hill et al./Miyazaki et al., in view of the teachings of Hsieh, in order to impart additional structural integrity to the auto body. Furthermore it is known to use adhesives having an elongation that is greater than about 300 percent in bonding an automobile windshield to the windshield frame as attested by Bhat et al., see column 1, lines 14-21, column 14, lines 62-67 and column 15, lines 1-10. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have used an adhesive having an elongation that is greater than about 300 percent in the method of Hill et al./Miyazaki et al./Hsieh, in light of the teachings of Bhat et al., in order to shorten production time. Although Hill et al./Miyazaki/Hsieh/Bhat et al. does not disclose connecting the roof portion of the vehicle to a pair of B-pillars and to a pair of C-pillars of the automotive vehicle body, however such connection of the roof module to the vehicle body is known as attested by Lumpe et al., see column 1, lines 41-54, column 2, lines 1-9 and 27-67, and column 3, lines 1-8. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made, to have connected the roof portion of Hill et al./Miyazaki/Hsieh/Bhat et al. to a pair of B-pillars and a pair of C-pillars, in light of the teachings of Lumpe et al., in order to provide additional stiffening of the body of the vehicle. Furthermore it is obvious that the provision of A, B or C-pillars in automotive vehicle bodies depends on the particular model/size size being manufactured and the examiner submits that it is within the general knowledge of one of ordinary skill in the art to assess the need for A, B or C-

pillars and appropriately provide them, if needed, to the body of the vehicle being manufactured, including mating fastening structures on a roof module to be attached to the vehicle body.

(10) Response to Argument

In response to Appellant's argument that the motivation provided by the Office Action is insufficient to maintain an obviousness rejection against claims 9, 14 and 17 of the present application because there is no indication in the prior art or knowledge of the skilled artisan that connecting a roof module such as the module of Hill et al. according to the teachings of Lumpe et al. would provide stiffening to an automotive vehicle body, the examiner submits that vehicle bodies with A, B, C or D-pillars are old and well known in the art and it is obvious that the provision of any particular pillars to a vehicle body will depend on the particular model, size or body type being manufactured. Lumpe et al. is merely a teaching reference, among others, that shows that the use of the different pillars is well known in the art. These are usually provided to accommodate vehicle doors or windows. It is also obvious, owing to the laws of physics, that providing B and C-pillars to a vehicle having an extended body length would provide additional stiffening to the body. The examiner maintains that it is within the general knowledge of one of ordinary skill in the art to assess the need for A, B or C-pillars and appropriately provide them, if needed, to the body of the vehicle being manufactured, including mating fastening structures on a roof module to be attached to the vehicle body.

In response to Appellant's argument that the examiner's conclusion of obviousness is based on improper hindsight reasoning, it must be recognized that any

judgement of obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the claimed invention was made, and does not include knowledge gleaned only from Appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170USPQ 209 (CCPA 1971). As shown above A., B or C-pillars are old and well known in the art and the use of such pillars with a roof module is well within the general knowledge of one of ordinary skill in the art.

In response to Appellant's argument that the rejection of claims 9, 14 and 17 does not address the invention of those claims as a whole thereby ignoring advantages of the methods of those claims, the examiner submits that the fact that Appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to Appellant's argument that there is no specific motivation for combining Bhat et al. with the other references of record, in particular that the "Office Action does not show how the prior art provides any specific motivation for providing an adhesive with elongation greater than about 300% for forming an adhesive connection between a bottom edge of a windshield and a body of vehicle wherein the transparent panel is already part of a roof module at the time of the adhesive connection", the examiner respectfully disagrees. As outlined in the rejections, the use of adhesives

having an elongation that is greater than 300% to attach windshields to vehicle bodies is well known in the art and the advantages and suitability of using such adhesive in bonding glass windows to window frames of an automobile are disclosed in the Bhat et al. reference (see for example col. 14, lines 62-67 and column 15, lines 1-11). The fact that in Appellant's invention the transparent panel (windshield) is already part of a roof module at the time of the adhesive connection is inconsequential. Furthermore the test of obviousness is not that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Essama Omgba



Conferees:

David Bryant, SPE 3726



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